

batches of eggs laid by a female before death have failed to hatch in several cases, even when a male was kept with the female. I am inclined to conclude, therefore, that failure of eggs to hatch is not necessarily due to sterility, as generally assumed, but may result in some cases from an unfavorable condition of the female. This possibility must therefore be borne in mind in experimental breeding.

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### Coleopterological Notes, Synonymical and Descriptive.

By H. C. FALL.

Several years ago (1901) a supposed new species of *Mycetina* was described by the writer (Trans. Am. Ent. Soc., XXVII, p. 304) under the name *endomychoides*. From a reading of Horn's description the form in hand seemed to be distinct from *limbata*, but subsequent comparison with the type convinces me that the two are identical. *Endomychoides*, therefore, falls into synonymy.

A little later, on comparing some specimens collected by Professor Wickham, at Coeur d'Alene, Idaho, and sent me as *M. hornii*, with California examples of *hornii*, the two were found to be quite distinct. There can be no doubt that the Californian specimens are the true *hornii*, the differential characters separating this from the Idaho form and the Eastern *perpulchra* are shown in the following table:

Prothorax wider just before the middle than near the base, the sides distinctly sinuate posteriorly: humeral pale spot subbasal, not involving the umbone; dilation of posterior tibiæ of male beginning at or a little below the middle. . . .	<b>perpulchra</b> Newm.
Prothorax with sides parallel or slightly divergent posteriorly, not evidently sinuate before the basal angles: humeral pale spot involving the umbones.	.
Form less stout, elytra more finely punctate, size a little smaller; posterior tibiæ of male not dilated, but arcuately bent apically.	<b>hornii</b> Crotch.
Form stouter, elytra more coarsely punctate, size larger; posterior tibiæ of male dilated at apical third . . . .	<b>idahoensis</b> n. sp.

These three species form a compact group, which must be separated subgenerically, if not generically, from both *limbata* and *testacea*. The above differences are quite sufficient for mutual separation, but there are a number of others that might be given, such as the relative depths of the transverse basal impression of the pronotum, the form of the scutellum, the prosternal impressed lines, etc. *Perpulchra* is widely distributed in the Eastern U. S.; *hornii* is known to me from both the Sierras and Coast Range of Middle California; Crotch also gives Oregon.

***Alaephus nitidipennis*.**

This species, described by the writer in *The Canadian Entomologist*, August, 1905, p. 275, is unquestionably the same as *macilentus* Csy. The overlooking of Major Casey's description was due to the accidental omission of his species from the Henshaw List.

The following species recently received is certainly new:

***Alaephus puberulus* n. sp.**

Rufotestaceous, elytra slightly paler; head and prothorax densely subrugosely punctate and somewhat dull; elytra more sparsely and finely punctate, shining; upper surface clothed with rather sparse but quite conspicuous short erect, pale hair. Antennæ slender, half the length of the body, second joint a little longer than wide, fourth shorter than the third and barely three times as long as wide; tenth nearly parallel, eleventh a little shorter than the tenth. Eyes much more prominent than the sides of the front, separated above by a distance subequal to the length of the fourth antennal joint, beneath by a distance one-third greater than the length of the second joint. Prothorax one-fourth wider than long, apex nearly as wide as base, sides broadly, evenly rounded, feebly sinuate before the hind angles, which are sharp and but slightly obtuse; disk evenly convex, broadly, feebly impressed near the middle of the side margins. Elytra four times as long and nearly twice as wide as the prothorax, humeri moderately prominent, sides nearly parallel and slightly arcuate to beyond the middle, punctures separated by rather more than their own diameters. Prothorax beneath closely punctate, metasternum and abdomen finely sparsely so. Basal joint of hind tarsus evidently shorter than the three following united, second and third joints slender, twice as long as wide or more. Length 6 mm.; width 2 mm.

Stockton, Utah.

Described from a single ♂ collected by Mr. Spalding and sent me by Mr. Knaus. Most nearly related to *gracilis*, but differing in the less elongate form, the erect pubescence of the upper surface, less approximate eyes and some other details.

Substituting *macilentus* Csy. for *nitidipennis* Fall, and including the present species, the table given by the writer in *The Canadian Entomologist*, XXXVII, p. 276, becomes as follows:

Table of **ALAEPHUS**.

- Eyes small, very slightly more prominent than the sides of the front, separated beneath by a distance which is about three times the length of the second antennal joint; fourth joint of antennæ barely twice as long as wide . . . . . **pallidus**.
- Eyes larger, much more prominent than the sides of the front; fourth joint of antennæ from nearly three to four times as long as wide.
- Body subglabrous, the pubescence recumbent and very sparse, fine and inconspicuous.
- Eyes separated beneath by a distance which is nearly twice the length of the second antennal joint; tenth joint of antennæ obconical, eleventh not shorter; elytra not much wider at base than the prothorax, strongly shining . . . . . **macilentus**.
- Eyes separated beneath by a distance which is scarcely as great as the length of the second antennal joint; tenth joint parallel, eleventh shorter than the tenth; elytra much wider than the prothorax at base, moderately shining . . . . . **gracilis**.
- Body sparsely but quite conspicuously clothed with short erect hairs.
- Eyes separated beneath by a distance which is about one-third greater than the length of the second antennal joint, tenth joint parallel, eleventh shorter; elytra much wider than the prothorax. **puberulus**.

In addition to the above synonymy, the following may be announced at this time:

*Microzeisia (Smilia) reversa* Fall = *atronitens* Csy.

*Scymnus dentipes* Fall = the ♂ of *haemorrhous* Lec.

*Leptogenius virginicus* Fall = *brevipennis* Csy.

*Corymbites tigrinus* is probably only a slight variety of *triundulatus* Rand.

*Acmaeodera versuta* Horn = the ♂ of *guttifera* Lec.

*Agrilus illectus* Fall = *jacobinus* Horn.

*Jacobinus* is out of place in Horn's table and in the following text, it being assigned to the section having the antennæ ser-

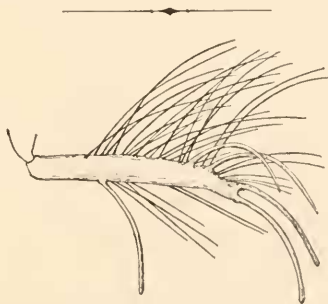
rate from the fourth joint, whereas the serration begins at the fifth joint. This error is, at least in part, responsible for the re-description of the species, since at the time of writing, comparison was made with those species only having the same antennal structure.

*Aphodius blaisdelli* Fall = *sparsus* Lec.

Both Dr. Blaisdell and myself were at fault in assigning this species to Horn's Group G, in which the middle and hind tibiae are fimbriate with equal spinules. Mistakes of this sort are very easily made in this genus, especially with specimens in which the spinules have become nearly equal through wear. In the present instance I must confess that I gave this matter no attention, accepting without question the doctor's group disposition of the species. There are two specimens standing as *sparsus* in the Le Conte cabinet, the second one, however, is not like the one bearing the label and has probably since been placed there conditionally; it is probably a member of Group G, but I did not take time to verify this supposition. This species, which was taken in numbers by Dr. Blaisdell, near San Francisco, in a wood-rat's nest, has lately been taken sparingly by both Dr. Fenyés and myself at Pasadena in similar situations.

*Oxoplus marginatus* Lec.=the ♂ of *cruentus* Lec.

This synonymy is announced in the Le Conte bibliography, by Henshaw, but appears to have been rejected later. Mr. Henshaw tells me that he does not know by whom it was proposed, or on whose authority it was annulled; I have no doubt, however, of its correctness.



Clasper of *F. vexator* Coq., described in this journal, Vol. xviii, p. 102.